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Application No.: 10/795952

Docket No.: TOW-066

REMARKS

Applicants affirm the election of Group I, claims 1-9 and 12-13, based on the restriction requirement issued by the Examiner. Applicants amend claims 1, 7, 8, 12, and 13 and add new claim 14. No new matter is added. Support for the claim amendment can be found throughout the specification and at least at Figs 1-3, 16-17, and 19-20, and related text. Upon entry of this amendment, claims 1-9 and 12-14 are presented for examination, of which claims 1, 7, and 12 are independent. Applicants respectfully submit that claims 1-9 and 12-14 define over the art of record.

Objection to the Specification

The Specification is objected due to the title of the invention and minor informalities in the specification. Applicants amend the specification to address the Examiner's concerns. Applicants respectfully request that the Examiner reconsider and withdraw the objection to the specification.

Claim Rejections Under 35 U.S.C. §102

Claims 1, 2, 5, and 7 are rejected under 35 U.S.C. §102(a) as being anticipated by Japanese Patent Application Publication No. JP 2003-197225 to Maeda et al. (hereafter "Maeda"). Applicants respectfully submit that the Maeda reference does not disclose the limitation of a plurality of power generation units positioned *on top of* the porous insulating film or the limitation that a portion of each electrolyte of the pair of adjacent power generation units is *sandwiched between* the first and second electrically conductive films, as recited in amended independent claim 1 or the limitation that a first end of said first electrically conductive gas diffusion layer *extends beyond* a first end of said first catalyst layer and wherein a second end of said second electrically conductive gas diffusion layer *extends beyond* a second end of said second catalyst layer, as recited in amended independent claim 7.

The Maeda Reference

The Maeda reference discloses a porous insulating film 120 that is wrapped around each power generation units 110. In contrast, amended independent claim 1 recites that the power

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generation units are positioned *on top of* the porous insulating film. The Maeda reference further discloses a first electrically conductive film 211 and a second electrically conductive film 212 that are connected by contact portion 220. Both the first and second conductive films 211 and 212 are in contact with an electrode 111 or 112 but not in contact with the electrolyte 115. In contrast, amended claim 1 recites that a portion of the electrolyte is *sandwiched between* the first and second electrically conductive films. The Maeda reference further does not disclose the limitation that a first end of said first electrically conductive gas diffusion layer *extends beyond* a first end of said first catalyst layer and wherein a second end of said second electrically conductive gas diffusion layer *extends beyond* a second end of said second catalyst layer, as recited in amended claim 7.

Accordingly, Applicants respectfully submit that the Maeda reference does not teach or suggest the limitation of a plurality of power generation units positioned *on top of* the porous insulating film or the limitation that a portion of each electrolyte of the pair of adjacent power generation units is *sandwiched between* the first and second electrically conductive films, as recited in amended independent claim 1 or the limitation that a first end of said first electrically conductive gas diffusion layer *extends beyond* a first end of said first catalyst layer and wherein a second end of said second electrically conductive gas diffusion layer *extends beyond* a second end of said second catalyst layer, as recited in amended independent claim 7. Applicants respectfully request that the Examiner reconsider and withdraw the rejections of independent claims 1 and 7.

Applicants note that the dependent claims also recite patentable subject matter. As such, for this and the reasons set forth above, Applicants respectfully submit that the dependent claims also define over the art of record.

#### Claim Rejections Under 35 U.S.C. §103

##### Claims 3 and 4

Claims 3 and 4 are rejected under 35 U.S.C. §103(a) as being unpatentable over the Maeda reference in view of United States Patent No. 3,770,509 to Winsel et al. (hereafter "Winsel"). Applicants respectfully submit that the combination of the Maeda reference and the

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Winsel reference do not teach or suggest the limitation that the power generation units are positioned *on top of* the porous insulating film or the limitation that a portion of each electrolyte is sandwiched between the first and second electrically conductive film, as recited in amended claim 1, which claims 3 and 4 depend.

#### The Winsel Reference

The Winsel reference is cited by the Examiner to show that the electrical conductive film can be made of composite material of resin and electrically conductive material, as recited in claims 3 and 4. However, like the Maeda reference, the Winsel reference does not teach or suggest the limitation that the power generation units are positioned on top of the porous insulating film or the limitation that a portion of each electrolyte is sandwiched between the first and second electrically conductive film, as recited in amended claim 1, which claims 3 and 4 depend.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 3 and 4.

#### Claim 8

Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over the Maeda reference in view of United States Patent No. 6,680,139 to Narayanan et al. (hereafter "Narayanan"). Applicants respectfully submit that the combination of the Maeda reference and the Narayanan reference do not teach or suggest that limitation that a first end of said first electrically conductive gas diffusion layer extends beyond a first end of said first catalyst layer and wherein a second end of said second electrically conductive gas diffusion layer extends beyond a second end of said second catalyst layer, as recited in amended claim 7, which claim 8 depends.

#### The Narayanan Reference

The Narayanan reference is cited by the Examiner to show that the first and second ends (103 and 104) have overlapping portions and the electrolyte (115) is interposed between the overlapping portions, where the overlapping portions are connected together by an electrically

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conductive member (135) that is a rivet, as required by claim 8. However, like the Maeda reference, the Narayanan reference fails to teach or suggest the limitation that a first end of said first electrically conductive gas diffusion layer extends beyond a first end of said first catalyst layer and wherein a second end of said second electrically conductive gas diffusion layer extends beyond a second end of said second catalyst layer, as recited in amended claim 7, which claim 8 depends.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 8.

Claims 6, 9, 12, and 13

Claims 6, 9, 12, and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over the Maeda reference in view of United States Patent Application Publication No. 2002/0187382 to Nishiumi et al. (hereafter "Nishiumi"). Applicants respectfully submit that the combination of the Maeda reference and the Nishiumi reference do not teach or suggest the limitation of a plurality of power generation units positioned *on top of* the porous insulating film or the limitation that a portion of each electrolyte of the pair of adjacent power generation units is *sandwiched between* the first and second electrically conductive films, as recited in amended independent claim 1, which claim 6 depends on. The combination of the Maeda reference and the Nishiumi reference also does not teach or suggest the limitation that a first end of said first electrically conductive gas diffusion layer *extends beyond* a first end of said first catalyst layer and wherein a second end of said second electrically conductive gas diffusion layer *extends beyond* a second end of said second catalyst layer, as recited in amended independent claim 7, which claim 9 depends on. The combination of the Maeda reference and the Nishiumi reference further does not teach or suggest the limitation of a seal member provided on at least one of the separators on the surface opposite to the surface facing the power generation units, where the seal member separates the reactant gas supply passage and the reactant gas discharge passage from the coolant passage, as recited in amended independent claim 12.

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The Nishiumi Reference

The Nishiumi reference teaches a casing 122 containing fuel cells and separators 218 having grooves 226 defining a coolant passage. However, neither the Nishiumi reference nor the Maeda reference explicitly teaches a seal member. Independent claim 12 has been amended to recite that a seal member is provided on a separator on the surface opposite to the surface facing the power generation units and the seal member separates the reactant gas supply passage and the reactant gas discharge passage from the coolant passage. Dependent claim 13 recites further limitation of the seal member, requiring the seal member extends along an entire width of three surfaces of the separator, where two of the three surfaces are parallel to one another.

Like the Maeda reference, the Nishiumi reference fails to teach or suggest the limitation that a first end of said first electrically conductive gas diffusion layer extends beyond a first end of said first catalyst layer and wherein a second end of said second electrically conductive gas diffusion layer extends beyond a second end of said second catalyst layer, as recited in amended claim 7, which claim 9 depends. The Nishiumi reference also fails to teach or suggest the limitation that the power generation units are positioned on top of the porous insulating film, and the limitation that a portion of the electrolyte is sandwiched between the first and second electrically conductive films, as recited in amended claim 1, which claim 6 depends. Hence, the combination of the Maeda reference and the Nishiumi reference fail to teach or suggest each and every element of claims 6 and 9.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejections of claims 6, 9, 12, and 13.

New Claim 14

Dependent claim 14 is added to further recite that a first reinforcing film and a second reinforcing film separate from the first and second electrodes, wherein the first and second reinforcing films sandwich a portion of the electrolyte of each power generation unit. Applicants respectfully submit that the art of record do not teach or suggest this limitation.

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**CONCLUSION**

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants believe no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. TOW-066 from which the undersigned is authorized to draw.

Dated: August 15, 2006

Respectfully submitted,

By 

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